

REMARKS

Claims 1-17 are pending in the instant application, and all of the pending claims are rejected. Upon entry of the instant amendment, claims 1-12, 16 and 17 will be pending. Applicants previously changed claim 1 by adding the term “thereby binding said taint compound to said polymeric material.” The recitation merely describes the interaction of the first component of the invention with the taint compounds, an interaction that is fully described in the specification.

At this time, Applicants change claim 1 to specify that the polymers of the present invention are “functionalized silanes or functionalized siloxanes.” No issue of new matter arises by way of this amendment as express support for these embodiments may be found in claim 13 as filed among other places. Applicants further clarify that the polymers “have terminal reactive groups or reactive groups not directly linked to the polymer backbone.” No issue of new matter arises by way of this amendment as it is clearly an inherent feature of all the compounds exemplified in the specification. In view of the foregoing, Applicants herein cancel claims 13, 14 and 15 as many of the recitations are incorporated into claim 1.

Rejection under the judicially created doctrine of obviousness-type double patenting

The Examiner maintains the *provisional* rejection under the judicially created doctrine of obviousness-type double patenting over claims 13-25 of copending Application No. 10/826,143. Applicants reiterate their willingness to file a Terminal Disclaimer to overcome the rejection upon notification of allowable subject matter.

Rejection under 35 U.S.C. 102(b)

The Examiner maintains the rejection of claims 1-17 over Feder, U.S. Patent 5,140,061. Applicants previously explained that the silicone dispersion of Feder comprises the α - ω -(dihydroxy)polydiorganosiloxane (component A) crosslinked into an elastomeric state upon removal of water under ambient conditions with a silane comprising a hydrolyzable amino or amido radical (component B) (*citing*, Feder, Column 3 and claim 1). The terminal hydroxy groups of the α - ω -(dihydroxy)polydiorganosiloxane react with the hydrolyzable amino or amido groups of the silane to form the crosslinked elastomeric product. There is ***no teaching or suggestion*** that the product itself of this crosslinking reaction comprises ***reactive groups that are free to react with flavor-active or odor-active taint compounds***. Hence, the compositions of Feder lack one of the basic components of the compositions of the present invention, namely a “first functional groups which react with at least one flavour-active or odour-active taint compound.”

Applicants also submitted data in the form of a Declaration of Rosalind Ma under 37 C.F.R. 1.132 demonstrating the reactivity of the reactive polymers. Applicants further explained that while the -NH groups in the crosslinked elastomer of Feder may have an affinity to react with the trichloroanisole, those groups may not be easily accessible to the trichloroanisole molecule.

The Examiner replies as follows:

1. The reaction product of Feder contains -NH groups that could react with flavor-active or odor-active taint compounds, and the data presented does not show that Feder’s crosslinked elastomer having -NH does not react or is not accessible to the trichloroanisole molecule; and

2. Rosalind Ma's declaration shows reactivity of silanes, not the polymers as argued, and there is no showing that all the polymers within the scope of the claims have reactive groups that react with trichloroanisole.

Still further, Applicants spoke directly with the Examiner on May 6, 2005 during a courteously granted personal interview. Applicants explained that following:

1. ***The amino groups of the Feder reaction product are directly linked to the Si atoms of the elastomer*** (See, the definition of X in part B of Claim 1, the exemplary aminosilanes listed in Column 5, lines 21-36, and Example 2). Therefore, due to steric hindrance, ***these amino groups are unlikely to be accessible to taint compounds***, and in particular the bulky trichloroanisole molecule. ***On the contrary, the first functional groups of the present application are not directly linked to a polymer backbone, and are generally terminal groups*** (See, Tables 1 and 2 and paragraph 12 of the Declaration of Rosalind Ma under 37 C.F.R. 1.132). Steric hindrance is therefore reduced by incorporating functional groups that are not directly linked to the polymer backbone, in particular terminal functional groups. Furthermore, the structure of the compounds of the present invention is such that reactive oxygen of the silica group may react with suitable functional groups on a substrate such as a cork thereby extending the terminal amino groups into the surrounding medium. This significantly increases the likelihood that the amino group will bind with taint a compound such as trichloroanisole. ***The extension of terminal functional groups attributed to the unique structure of the compounds of the instant invention clearly distinguishes the present invention from the compounds of Feder.***

2. The data submitted in the Declaration of Rosalind Ma under 37 C.F.R. 1.132 demonstrate the reactivity of silane components and the functional groups of the polymers. The silanes of Tables 1 and 2 are attached to a glass substrate by hydrolysis of one of their alkoxy substituents, and forming an ether type linkage with a hydroxyl group present on the surface of the substrate.

In response to these explanations, the Examiner invites Applicants to submit evidence showing that the coating of Feder does not react to odor or flavor active compounds.

Further explanation that the polymers of Feder do not react to odor or flavor active compounds

Applicants submit in response that it is clear that the *accessibility of amino groups has a significant effect on a compound's ability to retain a taint compound such as trichloroanisole*. As a result of the research surrounding the present invention, it is known that the orientation of the amino groups in polymers on the surface of a substrate such as a cork has a significant effect on the ability to retain a taint compound such as trichloroanisole. (See, Declaration of Nicola Lake under 37 C.F.R. 1.132, paragraph 7) Applicants submit that in order to retain a taint compound such as trichloroanisole, there must be a sufficient number of amino groups at the surface to react with the taint compound. As a result of the research surrounding the present invention, it has been found that, unless the aminosilanes are oriented in a monolayer (the amino groups then forming the top few atoms of the surface), the polymer is not sufficiently effective. (See, Declaration of Nicola Lake under 37 C.F.R. 1.132, paragraph 8)

The amino groups of Feder are not terminally located. Hence, the amino groups of Feder will not remove a significant amount of a taint compound such as trichloroanisole. The orientation of the polymer of Feder is simply not in a monolayer form. Moreover, the amino group of Feder is directly linked to an Si atom of silane. Hence, the amino group is not accessible to a taint compound such as trichloroanisole. (See, Declaration of Nicola Lake under 37 C.F.R. 1.132, paragraph 9)

Fees

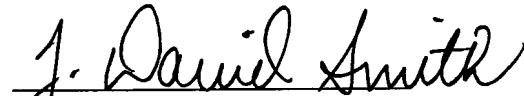
No fees other than the extension of time fee are believed to be necessitated by the instant Response. However, should this understanding be erroneous, authorization is hereby given to charge Deposit Account No. 11-1153 for any underpayment, or to credit any overpayments.

CONCLUSION

Applicants respectfully request entry of the foregoing Amendments and Remarks into the file history of the instant Application. The Claims as amended are believed to be in condition for allowance, and withdrawal of all of the outstanding rejections is therefore believed in order. Early and favorable action on the claims is earnestly solicited. Should a discussion be helpful in resolving any outstanding issues, the Examiner is invited to telephone the undersigned at (201) 487-5800.

Respectfully submitted,

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